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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
| 09/812,057      | 03/19/2001  | Ogijz Tanrikulu      | 2376.2003-000       | 9012             |

21005 7590 03/04/2003

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EXAMINER

HAROLD, JEFFEREY F

ART UNIT

PAPER NUMBER

2644

DATE MAILED: 03/04/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/812,057

Applicant(s)

TANRIKULU, OGUZ

Examiner

Jefferey F. Harold

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-54 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-54 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 5. 6) ☐ Other: .

## DETAILED ACTION

### *Information Disclosure Statement*

1. The references listed in the Information Disclosure Statement submitted on March 19, 2001, have been considered by the examiner (see attached PTO-1449).

### *Claim Rejections - 35 USC § 102*

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. ***Claims 1, 3, 4, 8-14, 22, 24, 25, 29, 31-33, 35, 43-46, 48, 50 and 52-54***, are rejected under 35 U.S.C. 102(b) as being anticipated by Cox et al. (United States Patent 5,353,346), hereinafter referenced as Cox.

Regarding **claim 1**, Cox discloses DTMF detection having sample rate decimation and adaptive tone detection. In addition Cox discloses a process for classifying a communication signal the process comprising:

separating the input stream of data into parallel output streams (18), which reads on claimed "subbands", as disclosed at column 2, lines 43-50 and exhibited in figure 1;

analyzing energies with in the output streams to derive data required for determining if the input has the requisite properties of an N-tone, as disclosed at column 3, lines 15-23 and exhibited in figures 1 and 2;

Regarding **claim 3**, Cox discloses everything claimed as applied above (see claim 1), in addition Cox discloses wherein filtering the at least one sinusoid to classify the signal using component isolation filters as disclosed at column 2, lines 41-52 and exhibited in figures 1 and 2.

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Regarding **claim 4**, Cox discloses everything claimed as applied above (see claim 1), in addition Cox discloses wherein the frequency estimators (22) estimate the frequency of the given sinusoid for modeling for detection of the given sinusoid, as disclosed at column 3, lines 15-21 and exhibited in figures 1 and 2.

Regarding **claim 8**, Cox discloses everything claimed as applied above (see claim 3), in addition Cox discloses wherein the block segmenters (15) divide the signal into segments, which read on claimed "windowing", the prior to estimating the frequency of the give sinusoid, as disclosed at column 3, lines 3-22 and exhibited in figures 1 and 2.

Regarding **claim 10**, Cox discloses everything claimed as applied above (see claim 1), in addition Cox discloses wherein classifying results in classifying the signal as DTMF, as disclosed at column 5, lines 22-64 and exhibited in figure 2.

Regarding **claims 11 and 12**, Cox discloses everything claimed as applied above (see claim 1), in addition Cox discloses narrowing classification possibilities by filtering the subbands with notch filters (24) corresponding to the number of frequencies of the sinusoids within the respective subbands, as disclosed at column 3, line 15 through column 4, line 2 and exhibited in figures 1 and 2.

Regarding **claim 13**, Cox discloses everything claimed as applied above (see claim 1), in addition Cox discloses wherein the separating the electrical signal into the subbands comprises extracting subbands of 0-1 kHz and 1-2 kHz, thus reducing the bandwidth, as disclosed at column 5, lines 35-49 and exhibited in figure 2.

Regarding **claim 14**, Cox discloses everything claimed as applied above (see claim 1), in addition claim 14 is interpreted and thus rejected for the reasons set forth above in the rejection of claim 8.

Regarding **claims 22, 24, 25, 29, 31, 32, 33, 35, 43, 44, 45, 46, 48, 50 and 52-54**, they are interpreted and thus rejected for the reasons set forth above in the rejection of claims 1, 3, 4, 8, and 10-14.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. **Claims 2, 23 and 51**, are rejected under 35 U.S.C. 103(a) as being unpatentable over Cox in view of applicant's admitted prior art.

Regarding **claim 2**, Cox discloses everything claimed as applied above (see claim 1), however Cox fails to disclose filtering the electrical signal using a power symmetric infinite impulse response filter. However, the examiner maintains that it was well known in the art to provide filtering the electrical signal using a power symmetric infinite impulse response filter, as taught by applicant's admitted prior.

In addition, applicant's admitted prior art, "Design and Discrete Re-optimization of All-pass Based Power Symmetric IIR Filters" discloses highly selective low-pass power

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symmetric IIR filters which are well suited of sub-band decomposition in applications such as acoustic echo cancellation.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Cox by specifically providing filtering the electrical signal using a power symmetric infinite impulse response filter, as taught by applicant's admitted prior art, for the purpose of reduced computational complexity.

Regarding **claims 23 and 51**, they are interpreted and thus rejected for the reasons set forth above in the rejection of claim 2.

4. **Claims 6 and 27** are rejected under 35 U.S.C. 103(a) as being unpatentable over Cox in view of Galand et al. (United States Patent 4,782,523), herein after referenced as Galand.

Regarding **claim 6**, Cox discloses everything claimed, as applied above (see claim 3), however, Cox fails to disclose accessing a look-up table having pre-determined ranges of data corresponding to the frequency of the given sinusoid. However, the examiner maintains that it was well known in the art to provide accessing a look-up table having pre-determined ranges of data corresponding to the frequency of the given sinusoid, as taught by Galand.

In a similar field of endeavor Galand discloses a tone detection process. In addition, Galand discloses wherein tone detection is performed through look up table operation, as disclosed in claim 6.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Cox by specifically providing accessing a look-up table having pre-determined ranges of data corresponding to the frequency of the given sinusoid, as taught by Galand, for the purpose of classifying a detected tone.

**Claim 27** is interpreted and thus rejected for the reasons set forth above in the rejection of claim 6.

5. **Claim 15, 17, 20, 21, 36, 38, 42, 47** are rejected under 35 U.S.C. 103(a) as being unpatentable over Cox in view of well know prior art (MPEP 2144.03).

Regarding **claim 15**, Cox disclose everything claimed, as applied above, (see claim 14), however, Cox fails to disclose a frame size of 10ms. However, the examiner takes official notice of the fact that it was well know in the art to provide a frame size of 10ms.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Cox by specifically providing a frame size of 10ms, for the purpose of determining the type of signal present.

Regarding **claim 17**, Cox disclose everything claimed, as applied above, (see claim 1), however, Cox fails to disclose classifying results in discriminating facsimile, modem, voice and DTMF signals. However, the examiner takes official notice of the fact that it was well know in the art to provide classifying results in discriminating facsimile, modem, voice and DTMF signals.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Cox by specifically providing classifying results in discriminating facsimile, modem, voice and DTMF signals, for the purpose of determining the type of signal present.

Regarding **claim 20**, Cox discloses everything claimed as applied above (see claim 1), however, Cox fails to disclose operating on a single digital processor. However, the examiner takes official notice of the fact that it was well know in the art to provide for operating on a single digital processor.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Cox by specifically providing a single digital processor, for the purpose of reducing the size of the apparatus.

Regarding **claim 21**, Cox discloses everything claimed as applied above (see claim 1), however, Cox fails to disclose a media gateway. However, the examiner takes official notice of the fact that it was well know in the art to provide a media gateway.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Cox by specifically providing for a media gateway, for the purpose of processing voice data over a data network using internet protocol.

Regarding **claims 36, 38, 42, 47**, they are interpreted and thus rejected for the reasons set forth above in the rejection of claims 17 20 and 21.



### ***Double Patenting***

A rejection based on double patenting of the "same invention" type finds its support in the language of 35 U.S.C. 101 which states that "whoever invents or discovers any new and useful process ... may obtain a patent therefor ..." (Emphasis added). Thus, the term "same invention," in this context, means an invention drawn to identical subject matter. See *Miller v. Eagle Mfg. Co.*, 151 U.S. 186 (1894); *In re Ockert*, 245 F.2d 467, 114 USPQ 330 (CCPA 1957); and *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970).

A statutory type (35 U.S.C. 101) double patenting rejection can be overcome by canceling or amending the conflicting claims so they are no longer coextensive in scope. The filing of a terminal disclaimer cannot overcome a double patenting rejection based upon 35 U.S.C. 101.

6. **Claims 1-54** are provisionally rejected under 35 U.S.C. 101 as claiming the same invention as that of claims 1-3, 611-12, and 14-16 of copending Application No.

09/696,730. This is a provisional double patenting rejection since the conflicting claims have not in fact been patented.

### ***Citation of Pertinent Art***

7. Park et al. (United States Patent 5,392,348), DTMF detection having sample rate decimation and adaptive tone detection.

Stroobach (United States Patent 5,119,322), Digital DTMF tone detector.

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**Conclusion**


8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jefferey F. Harold whose telephone number is (703) 306-5836. The examiner can normally be reached on Monday-Friday 7:30am-4pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Forester W. Isen can be reached on (703) 305-4386. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9314 for regular communications and (703) 872-9314 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-3900.



JFH  
February 8, 2003



FORESTER W. ISEN  
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